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Evaluation of the Fear of COVID-19 and State-Trait Anxiety Levels of Parents Taking Their Child to Hospital with Suspected COVID-19

COVID-19 Şüphesi ile Çocuğunu Hastaneye Getiren Ebeveynlerin COVID-19 Korkusu ve Durumluk- Sürekli Kaygı Düzeylerinin Belirlenmesi

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Özet

Küresel olarak 2,4 milyondan fazla insanın hayatını tehdit eden COVID-19 pandemisinin psikolojik, toplumsal, ekonomik ve çevresel etkilerinin boyutları incelenmeye devam edilmektedir. Bu araştırma koronavirüs salgını sırasında çocuğunun COVID-19 olabileceğinden şüphelenen ebeveynlerin korku ve kaygı düzeyleri, ebeveynlerin demografik bazı özellikleri ile korku ve kaygı düzeyleri arasındaki yordayıcı ilişkilerin belirlenmesi amacıyla yapılmıştır. Veriler "Kişisel Bilgi Formu", "COVID-19 Korkusu Ölçeği" ve "Durumluk-Sürekli Kaygı Ölçeği" kullanılarak toplanmıştır. Bilgisayar ortamında SPSS (ver:23.0) yazılımı ile yapılan veri analizinde tanımlayıcı istatistiksel testlerin yanı sıra iki grup için t testi ve ikiden fazla grup için ANOVA analizi, bağımsız gruplar için Mann-Whitney U testi ve ikiden fazla bağımsız gruplar için Kruskal Wallis testi kullanılmıştır. COVID-19 korkusu ile durumluk ve sürekli kaygıyı arasında bir ilişki belirlemek için Lineer Regresyon analizi kullanılmıştır. Araştırmaya çocuğunu COVID-19 şüphesi ile pediatri ünitesi acil servisine getiren 410 ebeveyn dahil edilmiştir. Ebeveynlerin orta düzeyde (19.69±6.30) korku, orta düzeyde (42.93±5.12) sürekli ve orta düzeyde (43.90±6.56) durumluk kaygısı olduğu, COVID-19 korkusu ile sürekli kaygı arasında anlamlı bir ilişki olduğu belirlenmiştir (R=0.117, R2=0.0147, F(1. 408) =5.629, p=0.018). COVID-19 korkusu ile katılımcıların cinsiyet, yaş, yaşanılan yer ve eğitim düzeyi arasında, kaygı ile çocuğun yaşı, COVID-19 hastalığını geçirmiş olma ve yaşanılan yer arasında anlamlı ilişki saptanmıştır. Araştırma sonuçları, COVID-19 korku ve kaygısı yaşama nedenlerine yönelik çalışmaların yürütülme gerekliliğini ortaya koymaktadır.

Anahtar Kelimeler: Anksiyete, çocuk, COVID-19, ebeveynler, korku

Abstract

The dimensions of the psychological, social, economic and environmental effects of the COVID-19 pandemic, which threatens the lives of more than 2.4 million people globally, continue to be examined. Research was conducted to determine the predictive relationships between the fear and anxiety levels of parents who suspect that their child may have COVID-19 during the coronavirus epidemic, demographic characteristics of the parents, and their fear and anxiety levels. Data were collected using the "Personal Information Form", "COVID-19 Fear Scale" and "State-Trait Anxiety Scale". In the data analysis performed with SPSS (ver:23.0) software in computer environment, besides descriptive statistical tests, t test for two groups and ANOVA analysis for more than two groups, Mann-Whitney U test for independent groups and Kruskal Wallis test for more than two independent groups were used. Linear Regression analysis was used to determine the relationship between fear of COVID-19 and state and trait anxiety. 410 parents who brought their children to the pediatric unit emergency department with the suspicion of COVID-19 were included in the study. It was determined that parents had moderate (19.69±6.30) fear, moderate (42.93±5.12) trait and moderate (43.90±6.56) state anxiety, and there was a significant relationship between fear of COVID-19 and trait anxiety (R=0.117, R2= 0.0147, F(1.408) =5.629, p=0.018). A significant relationship was found between the fear of COVID-19 and the participants' gender, age, place of residence and education level, and between anxiety and the age of the child, having had the COVID-19 disease and the place of residence. The results of the research reveal the necessity of conducting studies on the causes of COVID-19 fear and anxiety.

Keywords: Anxiety, children, COVID-19, fear, parents

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1. Introduction

The COVID-19 pandemic, which roughly affected 10% of the world's population or 780 million people, caused 4,238,546 deaths, and still bringing about 15,140,897 active cases (Wikipedia, 2022a) was declared as a global pandemic by the World Health Organization on March 11, 2020 (Aslan, 2020; Bao et al., 2020; Li et al., 2020; Lu et al., 2020; Pope, 2020, TR Ministry of Health, 2020). As of 28 May 2022, while there were 531,154,657 confirmed cases and 501,770,587 recoveries in the world, 6,310,157 patients died due to the virus (Wikipedia, 2022b).

All people have been affected by the changes brought about by the COVID-19 pandemic and the consequences of these changes on life. The pandemic has caused psychological effects by revealing many different sizes and types of negative emotions on children and their families (Duan and Zhu, 2020; Gloster et al., 2020; Loades et al., 2020; Xiao, 2020; Wang et al., 2020).

The COVID-19 virus has caused individuals to feel uncomfortable and restless with its risk of rapid transmission and death, revealing widespread fear and anxiety of COVID-19 (Yakut et al., 2020). In the first study conducted in the general population in China in the first two weeks of the COVID-19 pandemic, 53.8% of the participants experienced a moderate or severe psychological impact from the pandemic, 16.5% had moderate or severe depressive symptoms, 28.8% experienced moderate or severe anxiety, and 8.1% had moderate or severe stress symptoms (Wang et al., 2020). Another study states that Filipino individuals experienced difficulties such as "indifference, destruction, nihilism, paranoia, excessive attention, sadness, fear, and anxiety about self and family" (Nicomedes & Avila, 2020). Another research indicated that individuals experienced feelings of loneliness, stress, and anxiety during the epidemic (Ollivier et al., 2020); similarly, another study reported that individuals had post-traumatic stress disorder, anger, depression, anxiety-induced insomnia, frustration, and anxiety during the epidemic (Brooks, 2020).

The results of the early research regarding the pandemic, when the children's probability of encountering the virus was low, and the disease was limited since they did not go out as often as adults, were misleading, and later studies showed that children also got sick in many countries, especially during the opening of pre-schools and kindergartens (Lusignan et al., 2020; Wei et al., 2020).

Symptoms of COVID-19, which are milder than adults and are expected to recover completely within 1-2 weeks after the onset of the disease (Mehta et al., 2020), are similar in children and adults, but the disease presents less clinical signs in children than in adults (Paret et al., 2020; Zimmermann and Curtis, 2020). Fever and cough are the most commonly reported symptoms in children. In a study reported in the United States, 73% of 291 children had at least one sign of COVID-19. These symptoms are fever in 56% of children, cough in 54%, and shortness of breath in 13% (Chen et al.,

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ARAŞTIRMA MAKALESİ

2020). In a study conducted by Dong et al (2020) at the Wuhan Children's Hospital in China, 94 pediatric patients (4.4%) were reported as asymptomatic, 1088 (51%) mild, 826 (38.7%) moderate, and 112 (5.2%) severe cases. Severe cases were most common in children under 1 year of age and 1-5 years (Dong et al., 2020). In another study consisting of 1391 children, it was determined that 15.8% of 171 definitively diagnosed children were asymptomatic, 19.3% had an upper respiratory infection, and 41.5% had a fever as the most common symptom. Less common symptoms include fatigue, nasal congestion, diarrhea, and vomiting (5-9%). Pneumonia was diagnosed in 64.9% of the patients (Lu et al., 2020). In another study conducted in China, fever, cough, nausea, and diarrhea were detected in 134 of 416 children under 10. Viral pneumonia developed in 76% of cases (Chinese Center for Disease Control and Prevention, 2020). In a different study conducted with 36 children in China, 47% (17 patients) had an asymptomatic or mild clinical course, and 53% (19 patients) had a moderate clinical course with pneumonia. The most common clinical symptoms were fever in 36% and dry cough in 19% (Qiu et al., 2020).

In addition to causing many changes in the family structure physically, mentally, and economically, The COVID-19 pandemic continues to be a process full of unknowns for both children and their families, including intense stress, fear, and anxiety (Ahorsu et al., 2020; Kotecha et al., 2020; Sarı and Dağ, 2009). It has become inevitable for parents who experience many different emotions together during the pandemic to reflect their feelings, such as fear and anxiety, on their children (Mazza et al., 2020). It is thought that children may suffer permanent damage from this process, both due to the effect of the process and because it reflects the complex feelings of the parents (Ghosh et al., 2020). For these reasons, it is vital to evaluate parents' fears and concerns who suspect that their child may catch COVID-19 (Egunjobi, 2020; Pakpour and Griffiths, 2020; Shigemura et al., 2020). Research data is needed to develop evidence-based strategies to reduce negative psychological effects during the pandemic. Hence, this study aimed to determine the fear, anxiety, and effective factors of the COVID-19 epidemic in parents in Turkey.

2. Method

2.1. Aim of Study

This research was conducted descriptively to evaluate the fear and state anxiety levels of parents who suspect that their child may have COVID-19, and to investigate whether it is related to some characteristics of the parents, the child and the disease.

2.2. Research Questions

- What are the COVID-19 Fear and State-Trait anxiety levels of the participating parents?
- Is there a statistical relationship between the COVID-19 Fear and State-Anxiety levels of the participant parents and their sociodemographic characteristics?
- Is there a statistical relationship between the COVID-19 Fear and State-Anxiety levels of the participant parents and some characteristics of their children?
- Is there a correlation between the COVID-19 Fear of the participant parents and their State-Anxiety levels?

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ARAŞTIRMA MAKALESİ

2.3. Population and Sample of the Research

The population of the study consisted of 1204 parents who applied to the State Hospital Pediatric Emergency Service in Sivas city center between January 1, 2021 and April 1, 2021 with symptoms such as cough, high fever, runny nose, fatigue, nasal congestion, diarrhea, nausea, and vomiting in their children. No sample selection was made in the study, 410 parents who have at least one possible COVID-19 symptom in their child aged 0-18, who are between the ages of 18-60, at least primary school graduates, who agreed to participate in the study and could spare time to fill out the research forms completed.

2.4. Data Collection and Measurements

The research was carried out with the parents of children aged 0-18 years, who were brought to the COVID-19 polyclinic established in the pediatric emergency service, who underwent the COVID-19 test after the examination and necessary examinations. The research was conducted with all parents aged 18 and over who agreed to participate in the study (either a child's mother or father was a participant and it was based on the volunteering of this parent), in a well-lighted, frequently ventilated room meeting the comfort and hygiene requirements such as tables, chairs, disinfectants, paper towels, wet wipes. The parents were taken inside one by one, and the items used in the environment were disinfected after each parent. The data were collected through the parents' questionnaire including the "Personal Information Form," the "COVID-19 Fear Scale," and the "State and Trait Anxiety Scale," and this interview lasted for 15 minutes.

The research data were collected using three forms: “personal information form,” “The Fear of COVID-19 Scale,” and “State-Trait Anxiety Inventory (STAI).”

2.4.1. Personal Information Form: In this form 18 questions were asked about the gender, age, education, and COVID-19 of the parents and children, which were developed in line with the purpose of the researchers.

2.4.2. The Fear of COVID-19 Scale: The Turkish adaptation of the scale developed by Ahorsu et al (2020) to determine the fear levels of COVID-19 was carried out by Satıcı et al (2020). All items consisting of 7 questions of the scale, which can be used on adults over 18, are scored positively. There is no reverse-scored item in the scale, which is scored using a 5-point Likert-type scale (1-Strongly disagree, 5-Strongly agree). A score of 7-35 is taken from the scale, and a high score indicates that the level of fear of the COVID-19 pandemic is “high.” In the Turkish validity and reliability study of the scale, the Cronbach’s Alpha value was found to be (α=.82) (Satıcı et al., 2020). In this study, the reliability coefficient of the COVID-19 Fear Scale was calculated as Cronbach Alpha 0.83.

2.4.3. State-Trait Anxiety Inventory (STAI): Developed by Spielberger et al. in 1970, the inventory consists of two subscales: trait (SCI) and state-trait (TCI) each consisting of 20 items. The Turkish adaptation, validity, and reliability study of the State and Trait Anxiety Inventory was carried out by Öner and Le Compte in 1983. It can be applied to individuals over the age of thirteen. The state anxiety scale determines how the individual feels at a particular moment and under certain conditions, while the trait anxiety scale determines how the individual feels independently of the situation and

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ARAŞTIRMA MAKALESİ

conditions. Scores range from 1-4. Direct statements express negative emotions, reversed statements express positive emotions. After the total weights of the direct and reversed items are calculated separately, the total weight score of the reverse items is subtracted from the total weight score obtained for the direct items. A predetermined and unchanging value is added to this number. This constant value is 50 for the State Anxiety Inventory and 35 for the Trait Anxiety Inventory. The last value is the individual's anxiety score. Scores range from 20 (low anxiety) to 80 (high anxiety) (Öner & Le Compte, 1985). The Trait Anxiety Cronbach alpha reliability coefficient of the State-Trait Anxiety Inventory was found to be between 0.83 and 0.87, and the Trait Anxiety Cronbach alpha reliability coefficient was found to be between 0.94 and 0.96 (Öner & Le Compte, 1985). In this study, Trait Anxiety Cronbach alpha reliability coefficient was 0.85 and State Anxiety Cronbach alpha reliability coefficient was 0.92.

2.5. Ethical Considerations

In order to conduct the research, necessary written permissions were obtained from the Ministry of Health (dated 6/11/2020), the Ethics Committee (dated 18/11/2020 and numbered 2020-11/19), and the Provincial Health Directorate (numbered 76728045-799).

2.6. Limitations

The relatively limited sample size and the fact that this study was conducted only with parents in a hospital in one city constitutes the limitation of this study.

2.7. Data Analysis

In the data analysis performed with SPSS (ver:23.0) software in the computer environment, besides descriptive statistical tests, independent groups t-test for two groups and ANOVA analysis for more than two groups were used, the difference between groups was examined with Bonferroni test, Tukey's Post Hoc test, and Tamhane's T2 test. Mann-Whitney U test for two independent groups and Kruskal Wallis tests for more than two independent groups were used for non-normally distributed variables. In order to reveal the relationship between the variables in the study, Pearson Correlation analysis was applied for data that fit normally, and Spearman's Correlation analysis was used for data that did not fit the normal distribution. Linear Regression analysis was used to determine whether fear of COVID-19 affects state and trait anxiety. In the data analysis, the level of significance was accepted as $p<0.05$.

3. Results

It was found out that 38% of the children taken to hospital with the suspected COVID-19 were in the 0-6 age range, 51% were boys and 49% were girls, and 21.4% had a chronic disease diagnosis.

57.1% of the parents who brought their children to hospital with the suspected COVID-19 were mothers and 42.9% were fathers, 46.6% of the parents were aged between 30-39, 79.3% were nuclear family type, 44.1% were primary school graduates, 54.6% of them were unemployed, 59.3% of them had equal income and expenses, 92.9% lived in the city center, 87.6% had social security, and 46.3% had 3 or more children.

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ARAŞTIRMA MAKALESİ

It was determined that 30.7% of the parents had COVID-19 themselves, while the spouse of 30.7%, mother of 24.3%, father of 19.5%, children of 15.9%, and close relatives and friends of 19.1% (such as brother, uncle, aunt, mother-in-law, and father-in-law) had COVID-19 disease, 33.4% had contact with the suspected COVID-19 case, and 42.2% went out 5 times a week or more. It was also found that 38% received information about COVID-19 from TV-radio-newspapers, 38% from health personnel, 37.1% from the Internet, and 17.6% from people in their immediate surroundings.

The parents' mean scores on the COVID-19 Fear Scale (FCV-19S) is 19.69±6.30, the State Anxiety (NCI) mean score is 42.93±5.12, and the Trait Anxiety mean score is 43.90±6.56 (Table 1).

Table 1. Parents' Fear of COVID-19 and Mean SAI-TAI Score (n=410)

	Min-Max	Median	Mean±SD
Fear of COVID-19 Scale	7-35	18	19.69±6.30
State Anxiety Inventory (SAI)	32-62	42	42.93±5.12
Trait Anxiety Inventory (TAI)	27-69	44	43.90±6.56

min= minimum, max=maximum

In Table 2, it was determined that there was no statistically significant difference between the age of the parents, the number of children they had, the type of family, the income status of the family, and whether the family had social security, and the mean score of the COVID-19 Fear Scale and the mean score of the State-Trait Anxiety Inventory (p> 0.05) (Table 2).

Table 2. Mean Fear of COVID-19 and SAI-TAI Scores by Sociodemographic Characteristics of Parents (n=410)

		Fear of COVID-19 Scale	State Anxiety Inventory (SAI)	Trait Anxiety Inventory (TAI)
	n	***Mean±SD***	***Mean±SD***	***Mean±SD***
Parent				
Mother	234	21.25±6.41	42.42±5.25	44.50±6.69
Father	176	17.60±5.52	43.61±4.87	43.09±6.31
Test value		*[a]t=6.172*	*[a]t=-2.342*	*[a]t=2.173*
Significance		***p=0.000****	***p=0.020****	***p=0.030****
Parent Age				
18-29 years	86	20.89±6.48	43.26±5.06	43.98±6.86
30-39 years	191	19.32±5.78	42.30±4.86	44.06±6.45
40-49 years	111	19.03±6.67	43.36±5.28	43.63±6.72
Above 50 years	22	21.45±7.44	44.90±6.15	43.50±5.91
Test value		*[b]F=2.253*	*[b]F=2.440*	*[b]F=0.133*
Significance		*p=0.082*	*p=0.064*	*p=0.940*
Parent Educational Status				
Primary school	181	20.65±6.00	42.60±5.22	44.13±7.37
High school	124	19.24±6.16	43.43±5.11	44.11±6.14
University	105	18.56±6.77	42.90±4.95	43.24±5.50
Test value		*[b]F=4.161*	*[b]F=0.962*	*[b]F=0.696*
Significance		***p=0.016****	*p=0.383*	*p=0.499*
Difference		***1>3***	-	-

*[a] t-test, [b] ANOVA Variance Analysis, *p<0.05, ** Tukey's Post Hoc Test, sd= standard deviation*

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ARAŞTIRMA MAKALESİ

Table 2. Mean Fear of COVID-19 and SAI-TAI Scores by Sociodemographic Characteristics of Parents (n=410) (Continued)

		Fear of COVID-19 Scale	State Anxiety Inventory (SAI)	Trait Anxiety Inventory (TAI)
	n	***Mean±SD***	***Mean±SD***	***Mean±SD***
Parent Employment Status				
Employed	186	18.37±6.09	43.79±5.28	43.09±5.95
Unemployed	224	20.78±6.27	42.22±4.88	44.57±6.97
Test value		*[a]t=-3.927*	*[a]t=3.116*	*[a]t=-2.317*
Significance		***p=0.000****	***p=0.002****	***p=0.021****
Family Income Status				
Income<expenses	23	20.69±5.191	43.39±5.19	44.13±5.86
Income=expenses	243	19.68±6.11	42.81±5.20	43.91±6.89
Income>expenses	144	19.54±6.79	43.05±4.99	43.84±6.12
Test value		*[b]F=0.331*	*[b]F=0.193*	*[b]F=0.021*
Significance		*p=0.718*	*p=0.825*	*p=0.980*
Place of Residence				
City center	381	19.72±6.31	42.87±5.04	44.00±6.49
District center	13	15.92±6.71	44.76±7.02	45.76±7.18
Village/town	16	21.81±4.76	42.87±5.35	39.93±6.87
Test value		*[b]F=3.268*	*[b]F=0.861*	*[b]F=3.529*
Significance		***p=0.039****	*p=0.424*	***p=0.030****
Difference		***3>2*** **	-	***1>3*** **
Family Social Security				
Yes	359	19.61±6.37	42.89±5.11	43.91±6.44
No	51	20.21±5.86	43.19±5.23	43.82±7.42
Test value		*[a]t=-0.635*	*[a]t=0.390*	*[a]t=0.089*
Significance		*p=0.526*	*p=0.697*	*p=0.929*

*[a] t-test, [b] ANOVA Variance Analysis, *p<0.05, ** Tukey's Post Hoc Test, sd= standard deviation*

As seen in the table, it is seen that there is a statistically significant difference between the parents being a mother or father and the working status of the parents, and the mean score of the COVID-19 Fear Scale and the State-Trait Anxiety Inventory score (p<0.05).

It was determined that there was a statistical difference between the state anxiety mean scores of fathers (43.61±4.87) and working (43.79±5.28) parents and the mean scores of mothers (42.42±5.25) and unemployed (42.22±4.88) parents (p<0.05). From parent, it was found that the state anxiety level average score of the parents aged 50 and over, having only one child, a broken family type, high school graduate, less than their income, living in the district center and not having social security, was higher, but the parents' age, family type, education level, income of the family were higher. It was determined that there was no statistically significant difference between the State Anxiety Inventory mean score according to the status, place of residence and social security (p>0.05).

It was determined that the mean Trait Anxiety Score of mothers (44.50±6.69) and working (43.09±5.95) parents was higher than the mean score of fathers (43.09±6.31) and non-working (44.57±6.97) parents and was statistically significant (p<0.05). It was determined that there was a significant difference between the place where the parents lived and the Trait Anxiety Inventory Score

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ARAŞTIRMA MAKALESİ

average (p<0.05). It was determined that the trait anxiety level of the parents living in the city center (44.00±6.49) was higher than the mean score of the parents living in the village/town/town (39.93±6.87).

It was determined that there was a significant difference between being parents and working status of the parents and the mean score of the COVID-19 Fear Scale (p<0.05). It was determined that the mean COVID-19 fear score of mothers (21.25±6.41) and non-working (20.78±6.27) parents was higher than the mean score of fathers (17.60±5.52) and working (18.37±6.09) parents, and it was statistically significant (p<0.05). It was determined that there was a significant difference between the educational status of the parents and the mean score of the COVID-19 Fear Scale (p<0.05). It was determined that the mean score of COVID-19 fear (20.65±6.00) of primary school graduate parents was higher than the mean score of university graduate parents (18.56±6.77). There is a significant difference between the place where the parents live and the mean score of the COVID-19 Fear Scale (p<0.05). It was determined that the coronavirus fear mean score of the parents living in a village/town/town far from the city center (21.81±4.76) was higher than the mean score of the parents living in the city center (19.72±6.31). COVID-19 Fear Scale score average is higher for parents over 50 years of age, with an only child, broken family type, income higher than expenditure and without social security, but according to parents' age, family type, family income and social security It was determined that there was no significant difference between them (p>0.05).

Table 3. Mean of the Fear of COVID-19 and SAI-TAI Scores based on the Characteristics of the Disease

		Fear of COVID-19	**State Anxiety**	**Trait Anxiety**
	n	***Mean±SD***	***Mean±SD***	***Mean±SD***
Had COVID-19 disease				
Yes	251	20.43±6.45	42.97±5.06	43.61±6.46
No	159	18.50±5.89	42.86±5.23	44.35±6.72
Test value		*[a]t=3.048*	*[a]t=0.208*	*[a]t=-1.110*
Significance		***p=0.002****	*p=0.835*	*p=0.268*
In contact with a suspected COVID-19 case				
Yes	137	20.58±6.85	43.98±5.42	44.02±6.33
No	273	19.24±5.97	42.40±4.89	43.83±6.69
Test value		*[a]t=1.950*	*[a]t=2.971*	*[a]t=0.266*
Significance		*p=0.052*	***p=0.003****	*p=0.790*
Having chronic disease				
Yes	59	20.59±6.71	43.30±4.99	43.54±6.32
No	351	19.53±6.23	42.87±5.14	43.96±6.61
Test value		*[a]t=1.189*	*[a]t=0.601*	*[a]t=-0.452*
Significance		*p=0.263*	*p=0.548*	*p=0.652*
Number of going out per week				
1-3 time(s)	137	20.73±6.59	42.75±5.16	44.18±6.96
3-5 times	100	20.40±5.70	42.09±4.88	43.00±6.66
5 times and more	173	18.45±6.22	43.56±5.17	44.19±6.16
Test value		*[b]F=6.004*	*[b]F=2.785*	*[b]F=1.244*
Significance		***p=0.003****	*p=0.063*	*p=0.289*
Difference		***1>3-2*** **	-	-

*[a] t-test, [b]ANOVA Variance Analysis, *p<0.05, **Tukey's Post Hoc Test*

In Table 3, it was determined that the fear of the parents who had COVID-19 disease and went out of their house many times, and The State Anxiety Scores of the parents who were in contact with the suspected COVID-19 case were high, and there was a significant difference (p<0.05) (Table 3).

There is a significant difference between the number of parents going out and the mean score of the COVID-19 Fear Scale (p<0.05), and parents who go out 1-3 times a week have a significantly higher coronavirus fear than parents who go out 3-5 times a week and 5 times or more.

While there was no significant difference between the children's age, gender, chronic disease, and the parents' mean SAI-TAI scores (p>0.05), there was a significant difference between the children's age and the parents' COVID-19 Fear Scale mean score (p<0.05). It was also indicated that the difference was due to parents with children aged 7-12 (Table 4).

Table 4. Mean of Parents' Fear of COVID-19 and SAI-TAI Scores by Child's Characteristics

Characteristics	n	Fear of COVID-19 *Mean±SD*	State Anxiety *Mean±SD*	Trait Anxiety *Mean±SD*
Children's Age				
0-6 years	156	19.83±6.35	42.57±4.71	44.22±6.50
7-12 years	131	20.58±6.37	42.83±5.54	43.65±6.40
13-18 years	123	18.55±6.03	43.49±5.14	43.74±6.84
Test value		*[a]F=3.387*	*[a]F=1.155*	*[a]F=0.312*
Significance		***p=0.035****	*p=0.316*	*p=0.732*
Difference		***2>3*** **	-	-
Children's Gender				
Boy	209	19.64±6.17	42.78±5.49	43.44±6.87
Daughter	201	19.73±6.46	43.08±4.71	44.37±6.20
Test value		*[b]t=-0.145*	*[b]t=-0.583*	*[b]t=-1.432*
Significance		*p=0.885*	*p=0.561*	*p=0.152*
Diagnosis of the children's chronic disease				
Yes	33	19.17±6.30	42.75±4.08	43.00±6.65
No	377	19.75±6.31	42.95±5.24	44.01±6.55
Test value		*[b]t=-0.577*	*[b]t=-0.248*	*[b]t=-0.974*
Significance		*p=0.564*	*p=0.805*	*p=0.330*
Total number of children				
1 Child	76	21.00±6.16	43.97±4.81	44.86±5.90
2 Children	144	19.27±6.12	42.47±5.12	43.57±6.92
3 Children and more	190	19.48±6.45	42.86±5.21	43.75±6.53
Test value		*[a]F=2.069*	*[a]F=2.162*	*[a]F=1.046*
Significance		*p=0.128*	*p=0.116*	*p=0.352*

*[a]ANOVA Variance Analysis, [b] t-test, *p<0.05, **Tukey's Post Hoc Test, sd= standard deviation*

The correlation value between the parents' total mean score of SAI and the total score of the Fear of COVID-19 Scale was found to be very weak (r=0.074 p=0.117) in the positive direction but not significant (p>0.05). The correlation value between the parents' total TAI mean score and the Fear of COVID-19 Scale total score was found to be significant in a positive and very weak way (r=0.117; p=0.018) (p<0.005) (Table 5).

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Table 5. The Relationship Between Parents' SAI-TAI and Fear of COVID-19

Scale	n	Fear of COVID-19 Scale	
State Anxiety Inventory (SAI)	410	**r[a]**	0.074
		p	0.137
Trait Anxiety Inventory (TAI)	410	**r[a]**	0.117
		p	**0.018***

[a] *Pearson correlation analysis, *p<0.005.*

It was determined that there was a significant relationship between parents' fear of COVID-19 and TAI ($R=0.117$, $R^2=0.0147$, $F_{(1.\ 408)}=5.629$, $p=0.018$). Parents' fear of COVID-19 who bring their children to hospital with suspected COVID-19 explains 1.4% of the total variance of parents' trait anxiety level. This finding reflects that a one-unit increase in fear of COVID-19 of parents who bring their child to hospital with suspected COVID-19 significantly increases the trait anxiety of parents by 0.117 times, and the fear of COVID-19 is significantly effective at 1.4% in the increase of trait anxiety ($p<0.005$) (Table 6).

Table 6. The Relationship Between Parents' fear of COVID-19 and Trait Anxiety

	B	Standard Error	Beta	t	p
	41.508	1.058		39.218	***0.000**
Fear of COVID-19	0.121	0.051	0.117	2.373	***0.018**
$R=0.117$, $R^2=0.014$, $F_{(1.\ 408)}=5.629$, **p=0.018***					

4. Discussion

This study primarily aimed to reveal the predictive relationships between the fear and anxiety levels of parents who suspect that their child may have COVD-19, and secondarily, some demographic characteristics of the parents and their fear and anxiety levels. As a result of the research, it was concluded that the participant parents had moderate fears and anxieties (Table 1), and their fears and anxieties were affected by some demographic variables (Tables 2, 3, and 4).

In a study involving 1,210 participants from 194 cities in China during the early stages of the pandemic, 53.8% of participants rated the psychological impact of the epidemic as moderate or severe, and 16.5% had moderate to severe depressive and 28.8% had moderate to severe anxiety symptoms. In contrast, 8.1% reported moderate to severe stress levels. In the same study, it was reported that most of the participants (75.2%) were worried about their family members catching COVID-19 (Wang et al., 2020). As a result of a study conducted in Germany, generalized anxiety (44.9%), depression (14.3%), psychological distress (65.2%), and fear associated with COVID-19 (59%) were experienced by individuals (Bäuerle et al., 2020). Similar to our study, it was determined in a study that most of the parents were worried and anxious about the COVID-19 virus and infecting their children, and they described the fear and other psychological effects of isolation (Darlington et al., 2020). In the study of Sun et al. (2020), all parents were concerned about COVID-19 (Sun et al., 2020); besides, Rajkumar et al. (2020) asserted that individuals had increased levels of fear, anxiety, and stress during the pandemic and the increasing number of cases. (Rajkumar et al., 2020). A

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ARAŞTIRMA MAKALESİ

moderate level of fear of COVID-19 was detected in the study participants conducted in Çorum in Turkey (Gencer, 2020).

Considering the demographic data, mothers were more afraid of coronavirus than fathers in this study (Table 2), as in four other studies in Turkey (Altundağ, 2020; Bakioğlu et al., 2020; Göksu and Kumcagiz, 2020; Sakaoğlu et al., 2020) and in a study conducted in the USA, it was inferred that mothers had higher levels of fear and anxiety compared to fathers (Fitzpatrick et al., 2020). In addition to the results of other studies showing that the coronavirus pandemic causes more psychological effects in women (Kong et al., 2020; Wang et al., 2020; Zhou et al., 2020), no significant difference was found between the fear of COVID-19 and the gender variable in the two studies. (Ahorsu et al., 2020; Öktem et al., 2020). It can be thought that the possible reason for this is that the mother takes the main responsibility in the care of the child and needs father support only in cases where it is difficult to cope. Not knowing exactly what they are facing in the care of their children with COVID-19 symptoms during the pandemic process can be a challenge for mothers to cope with and can cause fear.

In this study, it was discovered that there was no significant difference between the parents' ages and their COVID-19 Fear and State-Trait Anxiety levels ($p>0.05$), but the fear and state anxiety mean scores of mothers over 50 were higher (Table 2). Parallel to this result, in studies conducted in China, Turkey, and Oman, no significant relationship was found between the ages of mothers and their fear of coronavirus and state-trait anxiety (Badahdah et al., 2020; Bakioğlu et al., 2020; Çifçi and Demir, 2020 Tamo, 2020). On the other hand, in two studies in Turkey, anxiety was found to be more intense in the 50-59 age group, and fear of COVID-19 in women aged 18-28 (Özmen et al., 2020; Sakaoğlu et al., 2020).

According to the results of the analysis of this study, it was indicated that there is a relationship between the parents' educational status and the fear of COVID-19 ($p<0.05$), and the fear of the parents with a low level of education was significantly higher than the parents with a high level of education (university graduate) (Table 2). A similar result was found in a study conducted with patients with COVID-19 (Al-Rahimi, 2021), and in another study, it was determined that the anxiety and depression levels of primary and secondary school graduates were significantly higher than university and graduate graduates (Kong et al., 2020). Besides, Özmen et al suggested that the fear of COVID-19 scores were higher in university graduates (Özmen et al., 2020), whereas Gencer and Ramezani et al claimed that there is no significant difference between educational status and fear of COVID-19 (Gencer, 2020; Ramezani et al., 2020).

When the anxiety levels of parents were examined based on occupation, it was suggested that there was a significant difference between father's employment and anxiety (Table 2) ($p<0.05$). This result differs from several studies in the literature (Althiabi, 2020; Skoda et al., 2020; Wang, 2020) in this respect. Fathers' forced contact with the outside, as well as high awareness of the disease, may be a possible cause of higher anxiety. The result of high trait anxiety levels of employed mothers ($p<0.05$) (Table 2) is in line with the results of several studies in the literature. Wang et al. reported in China that the relationship between being a working woman and stress, anxiety, and depression was significant

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ARAŞTIRMA MAKALESİ

(Wang et al., 2020). In the study conducted in the Philippines, it was determined that women were more affected by the pandemic, and they were more stressed, anxious, and depressed ($p < 0.05$) (Tee et al., 2020). These results can be interpreted as mothers' thought that daily exposure to risks in communal living spaces is a risk for their children.

Poverty causes psychological pressure, stress, and depression in individuals. The inability to meet the nutritional and other health care needs and transportation expenses in the disease can be counted among the possible main reasons that increase the fear of COVID-19. In one study, non-working low-income mothers experienced significant depression, anxiety, and stress symptoms (Malkawi et al., 2020). In another study, mothers in low-income families were significantly stressed (Tamo, 2020). In a study in Turkey, the unemployed and those with an income level of 4001-5000 TL had higher fear of COVID-19 scores (Özmen et al., 2020). In this study, it was found that the fear of coronavirus of unemployed parents was significantly high (Table 4), but there was no relationship between parents' income level and social security and Fear of COVID-19 and State-Trait Anxiety ($p>0.05$).

Living in the countryside can exacerbate negative mental health (Fong & Larocci, 2020). This study deduced that there is a significant relationship between the parents' place of residence and the fear of COVID-19 and Trait Anxiety ($p<0.05$), the coronavirus fears of the parents living outside the city center and the trait anxiety of the parents living in the city center were significantly higher (Table 2). While the possible reason for this is the busy, crowded, and stressful life in the city center, the difference in living conditions in rural areas is quite effective on the health status of individuals, and fear manifests itself in villages where income is low and access to health services is more limited. Accordingly, in a study conducted in China, mothers living in urban areas had less stress (Tamo et al., 2020).

In this study, it was identified that there was a significant difference between COVID-19 Fear and State Anxiety ($p<0.05$) (Table 3) of parents whom themselves had COVID-19 disease or someone around them and had contact with a suspected COVID-19 case. A study found that fear is significantly higher in individuals whose close friends and family members were diagnosed with COVID-19 (Akther et al., 2020; Mistry et al., 2020) and who lost a relative from the coronavirus (Duman, 2020). Another study proposed that those who had a COVID-19 test were more afraid of COVID-19 than those who did not and that the fear of COVID-19 showed a significant difference in individuals with COVID-19 around them (Özşahin and Aksoy, 2020). Likewise, it was indicated that there is an increasing level of state-trait anxiety as the duration of contact increases in those who have direct contact with people with COVID-19 (Sakaoğlu et al., 2020). Unlike these results, in another study, the concerns of those with a history of COVID-19 and those without a history of COVID-19 were not statistically significant (İnce et al., 2021), and in a different study, no significant correlation was found between fear of COVID-19 and being tested for COVID-19, family history of COVID-19 (positive/suspected cases), and family history of death due to COVID-19 (Ramezani et al., 2020).

It was inferred that the obligation to go out of the house significantly increased the fear of COVID-19 ($p<0.05$), and parents' fears of coronavirus who had less time to go out of the house was higher than the parents who went out of the house more (Table 3). One of the reasons for this result is that they

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ARAŞTIRMA MAKALESİ

have to leave their homes every day due to occupation, and the fear is controlled, while another result may be that individuals who do not leave the house do not go out because they are too afraid.

It was also found out that 14.4% of the participants had a chronic disease, and there was no significant difference between the chronic disease of both parents and children, fear of coronavirus, and state-trait anxiety (Table 3). However, based on the mean scores, it was understood that parents with chronic disease had more fear of coronavirus than those without the disease. Chronic diseases involve challenging processes that affect the quality of life and require long treatment and require a serious treatment process. When the literature is reviewed, it is seen that in a study conducted to evaluate the levels of depression, anxiety, and health anxiety experienced in the Turkish population during the COVID-19 epidemic, it was found that the accompanying chronic disease is a risk factor for health anxiety (Özdin and Özdin, 2020). In a study, the fear of COVID-19 was high in people with chronic disease and regular medication (Özmen et al., 2020). Another study deduced that parents of children with chronic lung disease experienced more anxiety and fear of coronavirus transmission due to the COVID-19 epidemic (Tural et al., 2020). In the Turkish literature, there are studies (Altundağ, 2020; Bakioğlu et al., 2020; Özşahin and Aksoy, 2020) showing that people with chronic diseases are more afraid of COVID-19 than those without.

In this study, while the fear and anxiety of the parents did not have a significant relationship with the children's gender, whether they had a chronic disease, and the number of children the family had, it was determined that there was a significant relationship between the children aged between 7-12 and the parents' fear of COVID-19 (Table 4). A few studies in the literature reported that the younger age of the children affects the fear of the parents (Cameron et al., 2020; Şenkalfa et al., 2020). In another study, families with children younger than 18 years were found to have higher levels of fear and anxiety than parents with children in other age groups (Fitzpatrick et al., 2020).

The correlation value between the parents' trait anxiety and the fear of COVID-19 was found to be positive and very weak (r=0.117; p=0.018) (Table 5) ($p<0.005$). This result shows that the level of trait anxiety increases significantly with the increase of fear of COVID-19 (Table 6). Similarly, one study found a significant relationship between the fear of COVID-19 and depression or anxiety (Ramezani et al., 2020), while another study suggested that anxiety was associated with increased anxiety and depressive symptoms and decreased life satisfaction (Magson et al., 2020).

5. Conclusion

As a result of this study, the participant parents had moderate fear and anxiety, the level of trait anxiety increased significantly with the increase in fear of COVID-19, the mothers were more afraid and more anxious than the fathers, and children's age, parents' educational status, age, whether they are employed, and the place of residence increase their fears and anxieties while having COVID-19 and possible contact with a person with COVID-19 increase the state anxiety.

Authors Contributions

Topic selection: FY, SD; Design: FY, SD; Planning: FY, SD; Data collection: SD; Data analysis: SD, FY; Article writing: SD, FY; Critical review: FY, SD.

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Conflict of Interest

It has been declared that there is no conflict of interest between the authors.

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